

Appln. No. 09/744,654
Amd. dated March 29, 2003
Reply to Office Action of July 2, 2003

Amendments to the Claims

This listing of claims will replace all prior versions,
and listings of claims in the application:

Listing of Claims:

Claims 1-122 (Cancelled).

123 (Currently amended). ~~[[The]]~~ A method according to
claim 18, for the preparation of a cell composition consisting
essentially of human hematopoietic CD38^{-/low} CXCR4⁺ stem cells
capable of migrating in response to stromal-derived factor 1
(SDF-1), said hematopoietic CD38^{-/low} CXCR4⁺ stem cells being
selected from the group consisting of stem cells that express
CXCR4 on the cell surface, CXCR4^{-/low} stem cells that have the
potential to express CXCR4 on the cell surface and are converted
to CXCR4⁺ cells upon stimulation with a suitable agent, and
combinations thereof, and wherein said hematopoietic CD38^{-/low}
CXCR4⁺ stem cells have the capacity of migrating to, and of
engraftment and repopulation of, the bone marrow in a host, said
method comprising stimulating with a suitable agent a cell
composition comprising hematopoietic CD38^{-low} CXCR4⁺ and CD38^{-/low}
CXCR4^{-/low} stem cells that have the potential to express CXCR4 on
the cell surface, and wherein the CD38^{-/low} CXCR4^{-/low} stem cells
are stimulated for up to five days with [[a]] the suitable agent
which is capable of converting CD38^{-/low} CXCR4^{-/low} into CD38^{-/low}
CXCR4⁺ stem cells, thus converting the CD38^{-/low} CXCR4^{-/low} into
CD38^{-/low} CXCR4⁺ stem cells, and sorting out those CD38^{-/low} CXCR4⁺
stem cells that migrate in response to SDF-1, wherein said
suitable agent is selected from the group consisting of a lectin,
a cytokine, at least one type of mammalian stromal cells, and

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mixtures thereof, said cytokines and stromal cells being cytokines and stromal cells involved in a process of maintenance, expansion, development, or combinations thereof, of stem cells.

124 (Previously presented). The method according to claim 123, wherein the $CD38^{-/low} CXCR4^{-/low}$ stem cells are stimulated with the said suitable agent for 1-2 days.

125 (Currently amended). ~~[[The]]~~ A method according to claim 117, for increasing the population of hematopoietic $CXCR4^{+}$ stem cells for use in clinical transplantation, which comprises up-regulating surface $CXCR4$ expression of hematopoietic stem cells and sorting out those $CXCR4^{+}$ stem cells that migrate in response to stromal-derived factor (SDF-1), said up-regulation being carried out by stimulation of a cellular population comprising hematopoietic $CXCR4^{+}$ and $CXCR4^{-/low}$ stem cells that have the potential to express $CXCR4$ on the cell surface, with a suitable agent, thus converting the $CXCR4^{-/low}$ into $CXCR4^{+}$ cells, and sorting out those $CXCR4^{+}$ stem cells that migrate in response to SDF-1, wherein the $CXCR4^{-/low}$ stem cells are stimulated for up to five days with a suitable agent capable of converting $CXCR4^{-/low}$ into $CXCR4^{+}$ stem cells, thus converting the $CXCR4^{-/low}$ into $CD38^{-/low} CXCR4^{+}$ stem cells, and wherein said suitable agent is selected from the group consisting of a lectin, a cytokine, at least one type of mammalian stromal cells, and mixtures thereof, said cytokines and stromal cells being cytokines and stromal cells involved in a process of maintenance, expansion, development, or combinations thereof, of stem cells.

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126 (Previously presented). The method according to claim 125, wherein the CXCR4^{-/low} stem cells are stimulated with said suitable agent for 1-2 days.

127 (Cancelled).

128 (Currently amended). A method in accordance with claim [[127]] 123, wherein said suitable agent is selected from the group consisting of SCF, IL-1, IL-6, IL-11, GM-CSF, and mixtures thereof.

129 (New). The method according to claim 123, wherein said suitable agent is a member selected from the group consisting of SCF and a mixture of SCF and IL-6.

130 (New). A method in accordance with claim 125, wherein said suitable agent is selected from the group consisting of SCF, IL-1, IL-6, IL-11, GM-CSF, and mixtures thereof.

131 (New). The method according to claim 125, wherein said suitable agent is a member selected from the group consisting of SCF and a mixture of SCF and IL-6.